

# APPLIED MATHEMATICS AND COMPUTATION

VOLUME 39

## RENPU GE

The Filled Function Transformations for Constrained  
Global Optimization ..... 1

## MITALI DE, KEITH W. HIPEL, AND D. MARC KILGOUR

Algorithms for Hierarchical Power ..... 21

## D. D. BAINOV AND A. B. DISHLIEV

Population Dynamics Control in Regard to Minimizing  
the Time Necessary for the Regeneration of a Biomass  
Taken Away from the Population ..... 37

## KRYSTIAN KUBICA AND JANINA KUCZERA

An Application of Cellular Automata to Model  
a Lipid Membrane ..... 49

## LINDA ALLEN, TRUMAN LEWIS, CLYDE F. MARTIN, AND

### MARK STAMP

A Mathematical Analysis and Simulation of a Localized  
Measles Epidemic ..... 61

## R. FAZIO

A Noniterative Transformation Method Applied  
to Two-Point Boundary-Value Problems ..... 79

## SHEN ZUHE AND M. A. WOLFE

On Interval Enclosures Using Slope Arithmetic ..... 89

## FERENC SZIDAROVSKY

On the Convergence of Nonstationary Algorithms  
Modeled by Point-to-Set Maps ..... 107

## IOANNIS K. ARGYROS

The Secant Method in Generalized Banach Spaces ..... 111

## CHRISTOPH KOPP

Invariant Measures for Piecewise Linear Transformations ..... 123

JAMES D. EVANS	
Applications of Complex Variable Residue Theory to the Evaluation of Irrational Definite Integrals. I	145
BALA SHETTY	
Approximate Solutions to Large Scale Capacitated Facility Location Problems	159
JAMES D. EVANS	
Applications of Complex Variable Residue Theory to the Evaluation Solution of Irrational Definite Integrals. II	177
HORST EISSFELLER AND SILVIA MELITTA MÜLLER	
A Note on Reducing Communication Costs in Explicit Time Stepping Methods on Parallel Computers	191
A. K. MITRA	
Graphing Implicit Functions $f(x,y) = 0$	199
CLYDE MARTIN AND SHISHEN XIE	
Observability of the Electropotential on a Nested Cylindrical Domain. I. The Continuous Solution	207
CLYDE MARTIN AND SHISHEN XIE	
Observability of the Electropotential on a Nested Cylindrical Domain. II. Numerical Solution	245
DONALD A. FRENCH AND JACK W. SCHAEFFER	
Continuous Finite Element Methods Which Preserve Energy Properties for Nonlinear Problems	271
VOLUME CONTENTS	

